

# Rhodora

JOURNAL OF

THE NEW ENGLAND BOTANICAL CLUB

---

Vol. 42.

September, 1940.

No. 501.

---

CONTRIBUTIONS FROM THE GRAY HERBARIUM OF HARVARD  
UNIVERSITY—NO. CXXXII

## A LIST OF PLANTS FROM INTERIOR ALASKA<sup>1</sup>

EDITH SCAMMAN

OF the great territory of Alaska—in extent equal to one-fifth the size of the United States—the Interior has received little attention from botanists. In Southeastern Alaska, the Aleutian Islands, and the Bering Sea region, many collections have been made and reports published, since the earlier years of Russian occupancy. Ledebour's "Flora Rossica" remains today a most valuable work for all students of Alaskan plant life.

But the vast Interior, cut through by the Yukon River—a natural highway for the gold seekers and adventurers of early days—and its drainage system, including the valleys of the Tanana and the Koyukuk Rivers, with Mt. McKinley Park as the southern boundary, contains a great wealth and variety of plants. Much of the region is unglaciated, except locally, and has, therefore, afforded a safe and secure home in which plant species have lived undisturbed for countless ages. On the mountains of this old region may be found growing in close proximity arctic-alpine plants, many circumpolar, cordilleran species of the Rocky Mts. and British Columbia, and Asiatic types, "transgressing" seven or eight hundred miles inland from the coast of Bering Sea. The distribution of plants in the Interior is, therefore, of considerable interest, and this list includes new localities and extensions of range for many species.

<sup>1</sup> Cost of publication defrayed by the author.



The summers of 1936 and 1937 were spent by the writer in Alaska for the purpose of collecting specimens for the Gray Herbarium. Small collections were made in Juneau and Seward, but are excluded here, as this list covers only vascular plants of the Interior, obtained from a number of different localities: Mt. McKinley National Park; Black Rapids, on the Richardson Highway, extending from the coast to Fairbanks; Fairbanks; Miller House, Eagle Summit, and Circle Hot Springs, all three near the Steese Highway, the only road from Fairbanks, the metropolis of the Interior, to Circle City on the Yukon; and Wiseman, the "Arctic Village" on the Middle Fork of the Koyukuk. The stations in this area extend from McKinley Park, 63° 43' no. lat., to Wiseman, about 67° 30' no. lat.

#### MT. MCKINLEY PARK

Two visits were made to the Park, one of three days only, July 5-7, 1936, and a longer period, June 13-22, in 1937. Spring was late in Alaska in 1937, and when I reached Savage River Camp, twelve miles from the railroad entrance to the Park, on June 13th, practically nothing was in bloom. From a collector's point of view it looked quite hopeless. But several days of warm weather with sunshine much of the night, causing underground ice to thaw and surface snow to melt, resulted in an almost unbelievable transformation. The stony banks of the Savage River, with swamp sand beyond, and open, parklike woods behind the Camp, were masses of brilliant color—*Silene*, *Anemones* (four species), *Delphinium*, *Aconite*, *Papaver*, *Parrya*, *Drabas*, *Saxifragas*, *Dryases*, *Potentillas*, *Rhododendron*, *Lupine*, *Dodecatheon*, *Mertensia*, and *Polemonium*. As I was eager to get farther north, I remained in the Park only long enough to collect 115 species. The majority of these were obtained within two or three miles of the Camp. A day's trip to the Rangers' cabin at Igloo, Sable Pass and Polychrome Pass yielded a few less common finds—*Viola biflora*, *Draba alpina*, *Potentilla nivea* and, on a rock pile near Sable Pass, *Astragalus falciferus* and several critical species of *Oxytropis*. A clump of pinkish-purple *Douglasia* in bloom at Polychrome Pass was the chief reward for the days spent at the Park.

#### RAPIDS

An impressive demonstration of the forces of nature was staged at Rapids on the Richardson Highway between my two visits there, August 7-10, 1936, and August 25-28, 1937. The Hunting Lodge is



situated on the Big Delta River, 138 miles south of Fairbanks, on the northeastern slopes of the Alaska Range, elevation 2130 feet. In 1936 a small glacier could be seen from the Lodge, merely as a glittering spot of ice high up in the mountains. A year later it had become a "runaway" glacier, had moved downward five miles, taking shrubs and all other vegetation with it, and stopped, a great wall of ice 300 feet high, on the opposite bank of the Big Delta.

On a dry, rocky bluff near the river a new variety of *Lesquerella arctica* grew in abundance. Tiny, low-growing *Saxifraga Eschscholtzii*, and *Woodsia alpina* and *Crepis nana* were also collected at Rapids, with other plants one would expect to find in the two habitats—spruce and birch woods bordering the swift-flowing glacial streams, and the mountain-sheep "pastures" at higher altitudes above the tree line.

#### MILLER HOUSE

A brief acquaintance with the plants of Eagle Summit, seven miles from Miller House, in 1936, made me realize the fine possibilities for collecting arctic-alpine plants there. So I returned the following year, happy to be back with my kind, hospitable friends, Mr. and Mrs. Frank Miller. There in a tiny log cabin next door to the roadhouse, post-office, and general store—all three in one—I remained from July 2 to 26. In the center of the "Circle diggings," 116 miles north of Fairbanks, this roadhouse is located in a valley, through which flow several mining creeks, Mammoth, Mastodon, and Miller.

Plants typical of the Interior valleys of an elevation of about 2000 feet were found here. Large clumps of the rusty-backed swords of *Dryopteris fragrans* shared the dry hillsides above the creeks with *Arctostaphylos Uva-ursi* and *A. rubra*, *Vaccinium Vitis-Idaea*, var. *minus* (Mountain Cranberry), *Empetrum nigrum*, *Pedicularis labradorica*, *Geocaulon lividum*, *Silene repens*, *Arnica attenuata*, *Saxifraga tricuspidata* and *Arenaria obtusiloba*. In the open tundra below were white pools of *Eriophorum* with *Carices*, *Andromeda polifolia*, *Vaccinium uliginosum*, *Rubus Chamaemorus*, *Polygonum viviparum*, and the straight pink plumes of *P. Bistorta*. *Parnassia Kotzebuei* and *P. palustris*, var. *neogaea*, *Linnaea borealis*, and tangled *Hedysarum alpinum*, var. *americanum* were sheltered by willows and alders in moist shady spots. Flat patches of *Arenaria physodes* were abundant, and delicate *Crepis elegans*, with long tap-root, penetrated the spaces between the piles of round stones thrown up by mining operations. Along the



lower part of the trail from Miller House to Eagle Summit shrubs and tall, weed-like plants of the familiar roadside association flourished luxuriantly—*Rubus idaeus*, var. *canadensis*, *Potentilla fruticosa*, *Rosa acicularis*, *Senecio lugens*, *Aster sibiricus*, *Solidago multiradiata*, *S. decumbens*, *Polygonum alpinum*, var. *lapathifolium* and *Epilobium angustifolium*. The latter is the most striking and conspicuous plant in the Interior, covering the low hills around Fairbanks with masses of brilliant color, visible for miles.

#### EAGLE SUMMIT

An Alaskan "travelogue" describes Eagle Summit, elevation 3880 feet, as a barren summit, the highest point on the road between Valdez on the southwestern coast to Circle City on the Yukon. The extreme top is level, with disintegrated rock fragments, dry and barren, indeed. In winter it is bleak, wind-swept, and bitterly cold, and is considered one of the most difficult places to cross by dog team. But in July all the cave-like hollows and wet slopes form an alpine rock garden of great beauty. Large snow patches remain nearly all summer between the slopes—a favorite place for caribou to seek refuge from mosquitos and flies, as well as from the heat. The borders of wet, springy ground where water trickles down from the snow afford a perfect home for *Ranunculus nivalis*, also *Claytonia sarmentosa* and *C. tuberosa*, *Senecio Kjellmanii*, *Saxifraga Hirculus*, *S. foliolosa*, *Dodecatheon frigidum*, *Parrya nudicaulis*, *Cardamine purpurea*, and numerous others.

Slightly higher in the rocky crannies grow different species—two dwarf *Salices*, *Oxyria digyna*, *Arenaria arctica* and *Arenaria macrocarpa*, *Silene acaulis*, var. *exscapa*, *Ranunculus pygmaeus*, *Anemone narcissiflora*, *Cardamine bellidifolia*, *Saxifraga rivularis*, *S. punctata*, *S. bronchialis*, subsp. *Funstonii*, *Dryas octopetala*, *Cassiope tetragona*, *Gentiana glauca*, *Arnica Lessingii*, *Saussurea densa*, and *Antennaria alaskana*. Five species of *Pedicularis* were close neighbors in spongy ground near the base.

It was a delight to discover several rarer plants—*Campanula uniflora*, inconspicuous and easily missed; fragrant and charming *Eritrichium aretioides*; a pink and white *Papaver*, *Oxytropis Mertensiana*, the first record for the Interior and third for Alaska; and *Eutrema Edwardsii*, known usually from the northern coast. Here on the slopes of Eagle Summit circumpolar, Asiatic or North Pacific, and cordilleran species lived side by side.



## PORCUPINE DOME

The red letter day of my two Alaskan summers came on July 12, 1937, when Mr. Miller and I climbed Porcupine Dome, the highest peak, elevation 4810 feet, of the whole region between Fairbanks and the Yukon. Wearing high rubber boots, our faces hidden by mosquito netting, and armed with a gun, for protection against unfriendly bears, we made slow progress across the "niggerheads." Our hike ended with a climb almost on hands and knees over the massive rock-pile to the flat plateau which formed the top of the Dome. There growing beside *Salix phlebophylla* and *Antennaria alaskana*, was a delicate little *Potentilla*, glabrous, with three-foliolate leaves. It proved to be *Potentilla elegans*, a rare plant of the mountains of Siberia, reported but once before on the North American continent, on the coast. Here it was more than 600 miles inland. It bears a close resemblance to a rare endemic of the White Mountains.

*Potentilla biflora*, found occasionally on the northwest coast, but rare in the Interior, had been collected on the way up. At a lower altitude in wet, springy ground below a snow patch were a few plants only of a single-flowered, purplish-magenta *Claytonia*—very characteristic and unlike any *Claytonia* I had seen either in the field or in the herbarium. This new species—recently described by Dr. Eric Hultén—and *Potentilla elegans* were enough thrills for one day, even though we missed meeting a grizzly.

## CIRCLE HOT SPRINGS

This is the chief resort of Interior Alaska, 9 miles southeast of the Steese Highway and about 138 miles north of Fairbanks. The hot baths of healthful mineral water are very popular, as are also the fine vegetables grown in the neighborhood of the springs in the hotel garden. Plants with a more southern range are found here, growing luxuriantly around the springs, in spite of the nearness to the Arctic Circle. I spent only several days at the Hot Springs in 1936 (July 17–22), but was repaid by finding *Juncus filiformis*, not previously reported from Alaska, and northern extensions of range for several plants. *Caltha natans*, of rare and local distribution, grew in ditches with *Ranunculus Purshii*, subsp. *yukonensis*.

## WISEMAN

Wiseman is a small village of Eskimos and gold miners, on the Middle Fork of the Koyukuk, about 75 miles north of the Arctic



Circle. It is reached by a plane trip of 200 miles from Fairbanks. One night in 1936, July 12, I flew there and back to view the midnight sun, picking up a few common plants in the town. But most of my specimens, the first collected or recorded from Wiseman, were obtained from August 2-12, 1937. It was late in the season for the best collecting, however.

The river valley and ravines are well wooded with *Picea*, *Populus tacamahacca* and *Betula papyrifera*, with *Populus tremuloides* on higher altitudes in the hills. *Juniperus communis*, var. *montana* is occasional and *Betula glandulosa* very common, as it is everywhere throughout the Interior. Three Orchids grew abundantly in the woods about the town—*Cypripedium passerinum*, *Habenaria obtusata* and *Habenaria hyperborea*. *Spiranthes Romanzoffiana* was occasionally found, probably the most northern station on record. *Boschniakia rossica*, called "corn pipes" by the Eskimo children, is very plentiful. Masses of *Dryas Drummondii*, with beautiful feathery styles, lined "Main Street," and *Epilobium latifolium* gave color to the river bars. Three unusual "finds" were true *Oxytropis deflexa*, the second station in Alaska; the rare *Antennaria pulcherrima*, and *Artemisia alaskana*. This is the only report of the latter, with the exception of the type specimen from the lower Yukon. Most of the Wiseman plants are noticeable for their unusually tall growth, due probably to the rapid forcing by so many hours of sunlight.

A few specimens, labelled "Along the Yukon River," were collected when the steamer stopped to load at various wood-piles between Tanana and Eagle, August 20-27, 1936. *Astragalus yukonis* from Tanana is the most noteworthy.

The material from Fairbanks is scanty and not representative, as I gathered plants there only while waiting to go on to other places, so missed some, well-known and common. I have also included several from Curry, on the Alaska R. R. between Anchorage and the Park, too far south to be classed as truly in the Interior.

While in Alaska I appreciated the courtesy shown me by Professor Gasser of the University at Fairbanks, Mrs. Ada Sharples of Juneau, author of a popular Flora of Alaska, and Mr. J. B. Anderson, who kindly offered me while in Juneau, the use of his private herbarium, containing the largest and finest collection of Alaskan plants in the Territory.



My deepest appreciation is expressed to Professor Fernald for his generous encouragement, kindly interest and helpful guidance, without which this study of flora of the Alaskan Interior could not have been undertaken.

On a visit to the Gray Herbarium in 1938, Dr. Eric Hultén of Lund looked over many of my specimens, giving me valuable aid in their identification and record of distribution. He also took several critical species back to Sweden for later study, and has since kindly described and named the new *Claytonia*.

"Contributions to the Flora of Alaska," by A. E. Porsild, of Ottawa, in *RHODORA*, 1939,<sup>1</sup> has been a constant guide and inspiration. To him I am greatly indebted for identifying and annotating a number of my puzzling specimens, and for his generous and helpful advice in regard to this list.

It is a pleasure to express my gratitude to Mr. C. A. Weatherby for his assistance in the classification of the *Pteridophyta*; to Dr. Hugh M. Raup, the *Salices*; to Mr. Reed Rollins, the *Cruciferae*; and to Dr. G. Haglund, the *Taraxaca*.

LIST OF VASCULAR PLANTS COLLECTED IN INTERIOR ALASKA  
(407 species and varieties, 847 numbers)

I. PTERIDOPHYTA

*BOTRYCHIUM LUNARIA* (L.) Swartz. Not common and seen only once. It may easily have been overlooked, however. Rapids, no. 28.

*WOODSIA ILVENSIS* (L.) R. Br. On exposed dry cliffs above the Susitna River. Curry, nos. 2 and 565.

*W. ALPINA* (Bolton) S. F. Gray. Crevices in rocks overhanging Gunnysack Creek. Rapids, no. 1.

Plants in this collection have straw-colored stipes, as is often the case in typical *W. alpina* of the Old World, which in all other characters they resemble.

*W. GLABELLA* R. Br. Frequent around Wiseman on moist rocks and in damp, mossy hollows shaded by overturned tree roots, no. 871.

*CYSTOPTERIS FRAGILIS* (L.) Bernh. Abundant in shaded ravines. This semicosmopolitan fern grows luxuriantly in many places. Park, no. 575; Rapids, no. 4; Circle Springs, nos. 3 and 6.

*PTERETIS NODULOSA* (Michx.) Nieuwl. *Onoclea nodulosa* Michx. In alder thickets along the Susitna River, sometimes reaching the height of six feet. Curry, no. 564; Fairbanks, no. 7.

*DRYOPTERIS FRAGRANS* (L.) Schott. *Thelypteris fragrans* (L.) Nieuwl. Apparently the most common fern of the north-central In-

<sup>1</sup> Porsild, A. E., *RHODORA* 41: 141-183, 199-254, 262-301 (1939).



terior. At Miller House hundreds of plants grow on dry, stony hillsides, nos. 15 and 700; Park, no. 574; Circle Springs, no. 14; Wiseman, no. 872.

*D. SPINULOSA* (O. F. Müll.) Watt, var. *DILATATA* (Hoffm.) Watt. See Fernald, Contrib. Gray Herb. **76**: 147 (1926), for discussion of *D. spinulosa* and *D. austriaca*. Common in southern Alaska along the coast, but rare in the central Interior. Circle Springs, no. 17.

*D. SPINULOSA* (O. F. Müll.) Watt, var. *AMERICANA* (Fisch.) Fernald, in *RHODORA* **17**: 48 (1915). Rare. Circle Springs, no. 16. Scales on stipe and a few on rachis, pale brown, concolorous.

*D. PHEGOPTERIS* (L.) C. Chr. *Phegopteris polypodioides* Fée; *Thelypteris Phegopteris* (L.) Slosson. Common in southern Alaska, but rare in the Interior. Rich woods by the river. Curry, no. 12.

*D. LINNAEANA* C. Chr. *Phegopteris Dryopteris* (L.) Fée; *Thelypteris Dryopteris* (L.) Slosson. Rare in cool, moist woods. Circle Springs, no. 10; Wiseman, no. 913. These specimens have a few glands on the rachis, and belong with forma *GLANDULOSA* Tryon in Fern Jour. **29**: 4 (1939).

*ATHYRIUM FILIX-FEMINA* (L.) Roth ex Mertens, var. *SITCHENSE* Rupr. ex Moore. Abundant and of tall, luxuriant growth near the hot springs. Circle Springs, no. 19. Forma *STRICTUM* (Gilbert) Butters, no. 20.

*EQUISETUM ARVENSE* L. Common and widely distributed. Fairbanks, no. 34; Miller House, no. 30; along Yukon River, no. 31; Wiseman, no. 29.

*E. PRATENSE* Ehrh. In willow and poplar thickets along banks of sloughs. Fairbanks, no. 1082.

*E. SYLVATICUM* L. See Fernald in *RHODORA* **20**: 129 (1918). Often in woodland. Park, no. 576; Fairbanks, no. 33; Circle Springs, no. 32.

*E. PALUSTRE* L. Abundant on mud bars and in shallow water. Fairbanks, no. 860; Wiseman, no. 873.

*E. FLUVIATILE* L. In sloughs and ponds. Fairbanks, nos. 34-a, 860-a; Miller House, no. 702.

*E. VARIEGATUM* Schleich. Occasional along borders of creeks. Miller House, no. 701; Wiseman, no. 874.

*LYCOPODIUM SELAGO* L. Frequent on mossy ledges in alpine situations. Park, no. 577; Rapids, no. 1044; Eagle Summit, nos. 35, 703.

*L. ANNOTINUM* L. Damp, rich woods. Rapids, no. 1043.

*L. ANNOTINUM* L., var. *PUNGENS* (La Pylaie) Desv. In drier places. Eagle Summit, nos. 37, 704; Circle Springs, no. 36; Wiseman, no. 876.

*L. CLAVATUM* L. Park, no. 578. Var. *MONOSTACHYON* Grev. & Hook. On dry ledges in hillside graveyard. Wiseman, nos. 40, 877.

*L. COMPLANATUM* L. Circle Springs, no. 41; in open woods on higher slopes, Wiseman, no. 875.

*SELAGINELLA SIBIRICA* (Milde) Hieron. See Hultén, Fl. Aleut. Isl. **62** (1937). On dry, bare cliffs. Wiseman, no. 878.



## II. SPERMATOPHYTA

## GYMNOSPERMAE

PICEA GLAUCA (Moench) Voss, and PICEA MARIANA (Mill.) B.S.P. constitute the coniferous forests of the Interior.

LARIX LARICINA (DuRoi) Koch. Occasional in swamps. Fairbanks, no. 43.

JUNIPERUS COMMUNIS L., var. MONTANA Ait. *J. sibirica* Burgsd. On dry, gravelly slopes, not common. Park, no. 579; Wiseman, no. 879.

## ANGIOSPERMAE

## MONOCOTYLEDONAE

TRIGLOCHIN PALUSTRIS L. Common in marshes and along the rivers. Fairbanks, no. 46; Wiseman, no. 880.

PHALARIS CANARIENSIS L. Introduced. Fairbanks, no. 1087.

HIEROCHLOË ODORATA (L.) Wahlenb. Park, no. 580.

H. ALPINA (Sw.) Roem. & Schult. On alpine summits. Park, no. 581; Eagle Summit, no. 706.

ARCTAGROSTIS ARUNDINACEA (Trin.) Beal. In the hills above Wiseman, no. 881.

A. LATIFOLIA (R. Br.) Griseb. Miller House, no. 709.

AGROSTIS SCABRA Willd. Circle Springs, no. 48.

CALAMAGROSTIS CANADENSIS (Michx.) Nutt., var. LANGSDORFI (Link) Inman. *C. Langsdorffii* Trin. See RHODORA 24: 143 (1922), and 32: 43–44 (1930). Very common. Rapids, nos. 49, 1049; Miller House, no. 710; Wiseman, no. 882.

DESCHAMPSIA CAESPITOSA (L.) Beauv. Fairbanks, no. 50.

TRisetum SPICATUM (L.) Richter. Miller House, no. 53.

BECKMANNIA SYZIGACHNE (Steud.) Fernald in RHODORA 30: 27 (1928). Widespread and common. Miller House, no. 707; Circle Springs, no. 54; Wiseman, no. 883.

POA ALPINA L. Stony soil. Park, no. 604.

P. ARCTICA R. Br. *P. rigens* Hartm. In alpine situations. Eagle Summit, nos. 55, 710-a.

P. ALPIGENA (Fries) Lindm. Miller House, no. 708.

GLYCERIA GRANDIS Wats. In sloughs about the Chena. Fairbanks, no. 56.

FESTUCA RUBRA L. Varies greatly. Rapids, no. 1050.

F. ALTAICA Trin. Miller House, no. 705.

BROMUS PUMPELLIANUS Scribn. In dry ground around cabins. Fairbanks, no. 1086.

AGROPYRON LATIGLUME (Scribn. & Sm.) Rydb. Rapids, no. 1053.

HORDEUM JUBATUM L. Abundant around towns. A nuisance in Fairbanks where it grows everywhere along the sidewalks and in vacant lots. Tanana, no. 58; Wiseman, no. 885.

ELYMUS INNOVATUS Beal. Common in dry fields and on the edges of woods. Rapids, nos. 60, 1052; Wiseman, no. 884.



*ERIOPHORUM OPACUM* (Björnstr.) Fernald in RHODORA 7: 85 (1905); 27: 203-10 (1925). Very common in swampy ground. This and the following species form large "niggerheads" in the tundra. Park, no. 587; Circle Springs, no. 65; Wiseman, no. 888.

*E. VAGINATUM* L. Miller House, no. 713.

*E. CALLITRIX* Cham. Occasional in bogs and along the edges of small ponds. Miller House, no. 712; Circle Springs, no. 63.

*E. SCHEUCHZERI* Hoppe. Miller House, no. 711; Wiseman, no. 887.

*E. MEDIUM* Anders. *E. Chamissonis* C. A. Meyer, var. *albidum* sensu Fernald. Rapids, no. 1048.

*E. ANGUSTIFOLIUM* Roth. Widespread and abundant in wet places. Miller House, no. 714; a larger form, no. 715; Circle Springs, no. 64; Wiseman, no. 889.

*SCIRPUS AMERICANUS* Pers. Circle Springs, no. 61.

*CAREX CAPITATA* L. Rare. In swamp near Fairbanks, no. 692.

*C. DISPERMA* Dewey. *C. tenella* Schkuhr. Beside creek at Miller House, no. 718.

*C. BRUNNESCENS* Poir. Fairbanks, no. 693.

*C. SUPINA* Wahlenb. Rare. Rapids, no. 1045.

*C. SCIRPOIDEA* Michx. Common. Park, no. 585; Rapids, no. 1046; Circle Springs, no. 69; Wiseman, no. 991.

*C. SCIRPOIDEA* Michx., var. *CONVOLUTA* Kükenth. Miller House, no. 719.

*C. CONCINNA* R. Br. Park, no. 583.

*C. CAPILLARIS* L. Occasional on mossy banks. Rapids, no. 72; Wiseman, no. 886.

*C. ANGARAE* Steud. Synops. Cyper. 190 (1855). *C. VahlIIi* Schkuhr, var. *inferalpina* sensu Fernald in RHODORA 35: 220-223 (1933), non Wahlenb. Very common. Rapids, no. 1047; Miller House, no. 717; Circle Springs, no. 75.

*C. STYLOSA* C. A. Meyer. Wiseman, no. 992. Probably first record for the Interior.

*C. PODOCARPA* R. Br. Park, no. 582; Eagle Summit, no. 720-A.

*C. TOLMIEI* Boott. Park, no. 586; Miller House, no. 722.

*C. ATROSQUAMA* Mackenzie. Miller House, no. 725.

*C. AQUATILIS* Wahlenb. Common in swamps and along creeks and rivers. Miller House, no. 716; Circle Springs, no. 80; Wiseman, no. 993.

*C. PHYSOCARPA* Presl. Miller House, no. 724.

*C. MEMBRANACEA* Hook. *C. membranopacta* Bailey. Common. Park, nos. 84, 584; Rapids, no. 85; Miller House, no. 723; Circle Springs, no. 83; Wiseman, no. 995.

*C. ROTUNDATA* Wahlenb. In low, marshy ground. Wiseman, no. 996.

*C. ROSTRATA* Stokes. In a ditch in Fairbanks, no. 87.

*JUNCUS BUFONIUS* L. Frequent along paths or roadsides. Fairbanks, nos. 89, 1085; Circle Springs, no. 88.



*J. BALTICUS* Willd., var. *HAENKII* (E. Mey.) Buch. Common in wet places. Park, no. 591; Fairbanks, no. 90; Wiseman, no. 998.

*J. FILIFORMIS* L. Rare. The first station for this slender *Juncus* reported in Alaska. Circle Springs, no. 93.

*J. ALPINUS* Vill. Fairbanks, no. 94.

*J. CASTANEUS* Smith. Abundant and widespread in the Interior. The most common *Juncus* in the places I visited. In marshy ground. Fairbanks, no. 96; Miller House, no. 726; Circle Springs, no. 95; Wiseman, no. 999.

*LUZULA PARVIFLORA* (Ehrh.) Desv. Alpine slopes. Park, no. 589.

*L. CONFUSA* Lindeb. Also an alpine species. Miller House, no. 729.

*L. MULTIFLORA* (Retz.) Lej. *L. campestris* (L.) DC., var. *multiflora* (Ehrh.) Čelak. Park, no. 588. Var. *FRIGIDA* (Buch.) G. Sam. *L. campestris*, var. *frigida* Buch. See Hultén, Fl. Aleut. Isl. 125 (1937). Miller House, no. 728.

*L. JAPONICA* Buch. Park, no. 590.

*TOFIELDIA PALUSTRIS* Huds. *T. minima* (Hill) Druce. Very common all through the central and northern Interior. Miller House, no. 102; Eagle Summit, no. 730; Circle Springs, no. 101; Wiseman, no. 890.

*T. COCCINEA* Richards. Found occasionally in higher, more alpine situations. Rapids, no. 103; Eagle Summit, no. 731.

*ZYGADENUS ELEGANS* Pursh. Abundant in grassy plains and thin, open woods. Rapids, no. 106 (in fruit), no. 1005 (in flower); Wiseman, nos. 105, 891.

*ALLIUM SCHOENOPRASUM* L., var. *SIBIRICUM* (L.) Hartm. *A. sibiricum* L. Occasional on sandy shores. On banks of the Yukon, Rampart, no. 107.

*LLOYDIA SEROTINA* (L.) Reichenb. This delicate little "Alp Lily" is rare in the mountains. A good-sized colony along the rocky shore of Savage River, Park, no. 592. A single plant was seen in a crevice at Eagle Summit.

*IRIS SETOSA* Pall. A tall, beautiful purplish-blue *Iris*, abundant along roadside ditches and on marshy ground in Fairbanks, no. 110 (in fruit), no. 688 (in flower).

*CYPRIPEDIUM PASSERINUM* Richards. Abundant in spruce woods along the Koyukuk River, Wiseman, no. 892.

As I was there in August my specimens were all in fruit, but the following year Tom Brady, a miner of Wiseman, sent me several in flower, no. 892-A.

*C. GUTTATUM* Swartz grows in Fairbanks. I saw mounted specimens there, but did not collect it myself.

? *HABENARIA* SP.

These plants, growing in marshland in Wiseman, no. 894, seem to



belong to the *Habenaria hyperborea* or *H. dilatata* group, as the lip is entire, about 5 mm. long, broader at the base and slightly dilated. Basal leaves are rather wide and obtuse, and the flowers greenish-white.

*H. OBTUSATA* (Pursh) Richards. Occasional in rich woods. Rapids, nos. 112, 1006; Wiseman, no. 893.

*SPIRANTHES ROMANZOFFIANA* Cham. & Schlecht. Rather rare and local. Circle Springs, no. 113; Wiseman, no. 895.

Several plants were found in moist ground on hills above the town. This is probably the most northerly station ever recorded for *S. Romanzoffiana*.

*CALYPSO BULBOSA* (L.) Oakes. A mounted specimen, collected along the Steese Highway, was seen at the Tanana Valley Fair in Fairbanks.

#### DICOTYLEDONEAE

*POPULUS TREMULOIDES* Michx. The aspen is common in dry soils throughout the Interior. Here and there in the hills above Wiseman, no. 897.

*P. TACAMAHACCA* Miller. *P. balsamifera* DuRoi, not L. See Jour. Arn. Arb. 10: 55 (1929). Common on flood plains along creeks and rivers. Miller House, no. 114; on the banks of the Koyukuk, Wiseman, no. 896.

*SALIX RETICULATA* L. One of the most common prostrate willows in the hills of the Interior. Park, nos. 115, 595; Rapids, no. 116; Wiseman, no. 903. The two latter belong to var. *ORBICULARIS* (Anders.) Floderus.

*S. ARCTICA* Pallas. *S. crassijulis* Trautv. Common in alpine regions. Park, nos. 118, 594 (Savage River Camp), 600; Paxson, no. 119.

*S. ROTUNDIFOLIA* Trautv. Eagle Summit, no. 735.

This small willow with bright green, round leaves and short pistillate catkins is rare in the mountains.

*S. PHLEBOPHYLLA* Anders. Growing in mats on bleak, bare mountain summits. Porcupine Dome, no. 736.

The stems of this species are crowded with skeletonized leaves.

*S. PSEUDOPOLARIS* Floderus. Rare. Eagle Summit, no. 117.

*S. STOLONIFERA* Coville. Eagle Summit, nos. 120, 737.

A low-growing willow of alpine regions, characterized by many stolons.

*S. NIPHOCLADA* Rydb. Frequent along the Richardson Highway on the banks of glacial streams. Paxson, no. 121; Rapids, no. 1039; Fairbanks, no. 1084; Wiseman, no. 904.



These specimens seem to belong to the general complex of *S. brachycarpa* Nutt. and *S. niphoclada* Rydb. The leaves tend to become gray or spotted when dry, are rounded at the base, on short petioles.

*S. GLAUCA* L. A circumpolar willow which varies widely. The Alaskan-Yukon Valley representative was named *S. Seemanii* by Rydberg. Miller House, nos. 123, 733.

*S. GLAUCA* L., var. *ACUTIFOLIA* Schn. See Bot. Gaz. **66**: 327 (1918), and **67**: 60 (1919); RHODORA **33**: 241-4 (1931). Very common along streams. Paxson, no. 124; Rapids, no. 1038; Circle Springs, no. 125; Miller House, no. 126; Ft. Yukon, no. 128; Wiseman, no. 899.

*S. BARCLAYI* Anders. Paxson, no. 129.

*S. ALAXENSIS* (Anders.) Cov., var. *LONGISTYLIS* (Rydb.) Schn. The felt-leaf willow is a characteristic common tree of valleys of the Interior. Park, no. 597; Miller House, nos. 130, 732; Wiseman, no. 901.

*S. BEBBIANA* Sarg. *S. rostrata* Richards. A shrub or small tree common in woods and along the banks of creeks and sloughs. Park, no. 593; Circle Springs, no. 131; Fairbanks, no. 1083.

*S. ARBUSCULOIDES* Anders. Occasional. Park, no. 599; Miller House, no. 734.

*S. PULCHRA* Cham. Apparently rather rare in the Interior. Park, no. 598.

*MYRICA GALE* L. Rare in this region. Along the Yukon River, no. 133.

*BETULA PAPYRIFERA* Marsh. The common white birch of the Interior forests. Abundant and widespread. Miller House, no. 738; along the Yukon River, no. 134; Wiseman, no. 905.

*B. GLANDULOSA* Michx. A vast portion of the tundra is covered by this dwarf birch. Miller House, nos. 135, 739; Wiseman, no. 906.

*B. GLANDULOSA* Michx., var. *SIBIRICA* (Ledeb.) Blake. Park, no. 136; Wiseman, no. 907.

*B. ERMANI* × *GLANDULOSA*. Park, no. 601.

*ALNUS CRISPA* (Ait.) Pursh. *A. fruticosa* Rupr. Abundant along the edges of creeks and streams. Rapids, no. 1037; Wiseman, no. 908.

*A. SINUATA* Rydb. Along river banks, near Fort Yukon, no. 137.

*GEOCAULON LIVIDUM* (Richards.) Fernald in RHODORA **30**: 21-24 (1928). *Comandra livida* Richards. Common in sterile soil on hill-sides, often associated with *Pedicularis labradorica*. Rapids, nos. 141, 1015; Circle Springs, no. 140; Wiseman, no. 909.

The leaves are frequently variegated.

*RUMEX MEXICANUS* Meisn. Along Yukon River, no. 142; Miller House, no. 740.

*R. ARCTICUS* Trautv. In bogs, Wiseman, no. 910.

*R. ACETOSA* L. On stony slopes, near Savage Camp, Park, no. 602.

*OXYRIA DIGYNA* (L.) Hill. Common in damp rocky crevices in the



mountains. Rapids, nos. 144, 1042; Park, no. 603; Eagle Summit, nos. 143, 741.

POLYGONUM AVICULARE L. Wiseman, no. 911.

P. VIVIPARUM L. Abundant throughout the alpine tundra. Park, no. 149; Eagle Summit, nos. 150, 744; Wiseman, no. 912.

P. BISTORTA L. *P. plumosum* Small. Scattered over the tundra, this plant from Asia with plummy rose-pink spikes, occurs less frequently than the preceding circumpolar, bulb-bearing species. Park, no. 147; Miller House, no. 743; Eagle Summit, no. 148, 745.

P. ALPINUM All., var. LAPATHIFOLIUM Cham. & Schlecht. A tall, conspicuous plant, very common in thickets along roadsides and in gravelly places. Miller House, no. 746; Circle Springs, no. 151.

It is called "Wild Rhubarb," and, when young and tender, is sometimes used for greens.

P. HYDROPIPEROIDES Michx. Circle Springs, no. 152.

P. CONVULVULUS L. Occasional. Fairbanks, no. 1074; Circle Springs, no. 153.

CHENOPODIUM CAPITATUM (L.) Asch. *Blitum capitatum* L. Common around cabins and in vacant lots. Fairbanks, nos. 154, 1076.

C. ALBUM L. A common weed. Fairbanks, no. 1077.

CLAYTONIA SARMENTOSA C. A. Meyer. *Montia sarmentosa* Robinson. Large clumps of this delicate, pink *Claytonia* grew in wet, springy spots at the base of Eagle Summit, nos. 156, 747. A small specimen (in bloom) was brought to me by an Eskimo in Wiseman, no. 914.

C. TUBEROSA Pall. Occasional with the preceding at the base of the Summit, no. 748.

The large tubers of this white-flowered plant are eaten by Eskimos and Indians. Both these *Claytonias* have been considered endemic to the North Pacific or to the Bering Sea region.

C. SCAMMANIANA Hultén in *Botaniska Notiser* 4: 826-827, fig. 1 (1939). Porcupine Dome, July 12, 1937, no. 749.

A few plants of this brilliant purplish-magenta *Claytonia* made a vivid patch of color at the base of a melting snowbank on the lower slopes of the Dome. I saw it only in this one spot throughout the region. It is very characteristic in appearance, low in growth, single-flowered, with long, narrow basal leaves.

STELLARIA CALYCANTHA (Ledeb.) Bong., var. ISOPHYLLA Fernald. Not common. Miller House, no. 750-A.

S. CALYCANTHA (Ledeb.) Bong., var. FLORIBUNDA Fernald. Miller House, no. 752.

S. CRASSIFOLIA Ehrh. *Alsine crassifolia* (Ehrh.) Britton. Occasional in sloughs. Fairbanks, no. 862.



S. LONGIPES Goldie. *Alsine longipes* (Goldie) Cov. Common throughout the region. Very variable. Park, no. 611; Eagle Summit, no. 750; Circle Springs, no. 159. A glaucous form with stiffer leaves described as var. LAETA (Richards.) Wats. Rapids, nos. 160, 1008; Miller House, no. 751.

S. LONGIFOLIA Muhl. *Alsine longifolia* (Muhl.) Britton. Miller House, no. 752-a.

S. MEDIA (L.) Cyrill. Introduced. Fairbanks, no. 158; Wiseman, no. 920.

CERASTIUM VISCOSUM L. Introduced. Wiseman, no. 919.

C. BEERINGIANUM Cham. & Schlecht. Very common throughout the region. Park, no. 607; Fairbanks, no. 1055; Miller House, no. 753; Eagle Summit, no. 163.

C. BEERINGIANUM Cham. & Schlecht., var. GRANDIFLORUM (Fenzl) Hult. Fl. Aleut. Isl. 165 (1937). This larger variety, with petals much longer than the green sepals and acute leaves, is not as common. In wet places. Rapids, nos. 162, 1009; Eagle Camp, no. 698.

SPERGULARIA RUBRA (L.) J. & C. Presl. Probably introduced. Fairbanks, no. 1067.

ARENARIA LATERIFLORA L. *Moehringia lateriflora* (L.) Fenzl. Not very common, but widely distributed in woods and thickets. Curry, no. 571; Miller House, no. 760; Circle Springs, no. 164.

A. PHYSODES DC. *Merckia physodes* Fisch. This North Pacific species seems to be very plentiful wherever it is found in this region. In gravel and mining debris at Miller House, no. 755; Circle Springs, no. 166; Wiseman, no. 915.

A. DAWSONENSIS Britton. Rare. Along road at the base of Eagle Summit, no. 167; Wiseman, no. 918.

A. RUBELLA (Wahlenb.) Sm. On stony ground. Park, no. 610; Rapids, nos. 169, 1007.

A. ROSSII R. Br. On damp slopes. Conspicuous for its reddish-purple sepals. Miller House, no. 168; Eagle Summit, no. 756.

A. OBTUSILOBA (Rydb.) Fernald in RHODORA 21: 12-15 (1919). Park, no. 609; Rapids, no. 170; in great clumps on dry cliffs and ledges back of Miller House, no. 759.

A. ARCTICA Steven. *Minuartia arctica* (Steven) Aschers. & Graebn. Park, no. 173; Eagle Summit, nos. 174, 758.

A. MACROCARPA Pursh. *Minuartia macrocarpa* (Pursh) Ostenf. Park, no. 171; Eagle Camp, no. 697; Eagle Summit, nos. 172, 757.

Both this species and the preceding were very abundant on the mountains in the Park and the Eagle Summit region. They are sometimes confused, if not found in fruit. See Hultén, Fl. Kamtch. 2: 79-81 (1928) for descriptions of the two species. The stems of *A. macrocarpa* are matted-cespitose instead of tufted; the lower leaves are denticulate and falcate; the stem-leaves are connate-clasping and



very glandular; the sepals and petals are longer than and of different shape from those of *A. arctica*; the flat filaments widen more gradually to the dilated base.

*SILENE ACAULIS* L., var. *EXSCAPA* (All.) DC. This arctic species forms large cushions in the mountains of the Interior. Abundant in gravelly places along the Savage River. Park, no. 605; Eagle Summit, nos. 175, 761.

*S. ACAULIS* L., var. *SUBACAULESCENS* (F. N. Williams) Fern. & St. John in *RHODORA* **23**: 119–120 (1921). This western cordilleran variety is rare in the Interior of Alaska. It was found only in the Park, nos. 176, 606.

*S. REPENS* Patrin. Occasional on exposed slopes at altitudes of about 2000 feet in places where one finds *Pedicularis labradorica*, *Arnica attenuata* and often *Dryopteris fragrans*. Miller House, nos. 177, 762; on road between Miller House and Eagle Summit, no. 178.

*S. WILLIAMSII* Britt. in Bull. N. Y. Bot. Gard. **2**: 168 (1901); see Porsild in *RHODORA* **40**: 212 (1938). In dry places on the banks of the Chena River, Fairbanks, nos. 179, 1056.

*LYCHNIS TAYLORIAE* Robinson in Proc. Amer. Acad. **28**: 150 (1893). See *RHODORA* **34**: 22–25 (1932). Occasional in alpine regions. Eagle Camp, nos. 699, 764.

*L. APETALA* L. *Melandrium apetalum* (L.) Fenzl. Seen only at the base of the higher summits. Eagle Summit, no. 180; Porcupine Dome, no. 763.

*NUPHAR VARIEGATUM* Engelm. *Nymphozanthus variegatus* (Engelm.) Fernald. Observed commonly in ponds and small lakes in the lower regions of the Interior.

*CALTHA NATANS* Pall. This small white-flowered *Caltha* is probably rare in the Interior. Collected only once in a wet, boggy area with *Ranunculus Purshii*, subsp. *yukonensis*, Circle Springs, no. 181.

It has an interesting distribution from northern Mongolia and Kamtchatka, in the Bering Sea region, with isolated stations in Alberta, Athabasca, and northern Minnesota.

*C. PALUSTRIS* L., var. *ASARIFOLIA* (DC.) Huth. Very common in southwestern Alaska and observed in ditches along the R. R. tracks from McKinley Park to Fairbanks. Collected it at Seward, but neglected to get specimens from the Interior. Probably common in the lowlands.

*ACTAEA RUBRA* (Ait.) Willd. *A. spicata* L., var. *rubra* Ait. Apparently very rare in the central and northern Interior. Circle Springs, no. 183. Plants with white berries (forma *NEGLECTA* (Gillman) Robinson—*A. eburnea* Rydb.) as well as red grew tall and luxuriantly in thickets and thin woods in the neighborhood of the Hot Springs. Both specimens in fruit. Circle Springs, no. 184.



**DELPHINIUM MENZIESII** DC. Frequent in the mountains of the Interior. Eagle Summit, nos. 186, 765; on the way to Porcupine Dome, no. 766.

**D. SCOPULORUM** Gray, var. **GLAUCUM** Gray. *D. Brownii* Rydb. A tall plant often four or five feet high. Collected in two places only, but it appeared to be common in thin woods in lower regions. Rapids, no. 1014; Fairbanks, no. 185.

**ACONITUM DELPHINIFOLIUM** DC. Widespread and common throughout the Interior, in thickets on hills and slopes of mountains. Rapids, nos. 188, 1013; Circle Springs, no. 187; Eagle Summit, no. 771; Wiseman, no. 922.

**ANEMONE PATENS** L., var. **WOLFGANGIANA** (Bess.) Koch. *Pulsatilla ludoviciana* (Nutt.) Heller. My specimen from the Park, no. 613, was in fruit, but a beautifully pressed flower was given me by a young girl in Fairbanks.

A well-known and beloved wild flower of the Interior, called generally "Wild Crocus." The very large purple blossom comes very early in the spring as soon as the snow melts.

**A. PARVIFLORA** Michx. One of the earliest flowers to bloom at Savage River Camp, in the Park, about the middle of June, no. 616. In Wiseman, no. 923, I collected both flowers and fruit the first week in August. Other collections were made at Rapids, no. 191, and on the road below Eagle Summit, no. 190.

A very common *Anemone* of wide-spread distribution. The backs of the sepals are usually tinged pink or blue.

**A. PARVIFLORA**, var. **GRANDIFLORA** Ulbr. in Engl. Bot. Jahrb. **37**: 251 (1905). Park, nos. 189, 617.

This variety, with the large flowers nearly two inches in diameter, was the most abundant at Savage River Camp. It seemed quite distinct, the sepals in my specimens lacking the bluish tinge.

**A. MULTIFIDA** Poir., var. **HUDSONIANA** DC. *A. globosa* Nutt. See **RHODORA** **19**: 141 (1917). Occasional in gravelly places. Rapids, no. 192.

**A. NARCISSIFLORA** L. *A. zephyra* A. Nels. One of the most beautiful of the Alaskan wild flowers, growing sometimes in large masses, in dry, rocky soil in the mountains of the Interior. General throughout the territory. Park, nos. 614, 615; Eagle Summit, nos. 195, 767. Often the plants of higher altitudes where there is little soil are single-flowered, described by Eastwood as var. **UNIFLORA**.

**A. RICHARDSONII** Hook. This low-growing bright yellow *Anemone* prefers moist, springy ground. Common along the southwestern coast, and also in the Bering Sea region, but occasional in the Yukon Valley. Park, no. 612.



*RANUNCULUS PURSHII* Richards., ssp. *YUKONENSIS* (Britt.) Porsild. *R. yukonensis* Britt. in Bull. N. Y. Bot. Gard. 2: 168 (1901). Occasional along edges of ponds. On the mud of a dried-out swamp. Both flowers and leaves very small. Circle Springs, no. 198.

*R. HYPERBOREUS* Rottb. In wet places. Paxson, no. 199.

*R. NIVALIS* L. Park, no. 618; Eagle Summit, nos. 200, 769.

True to its name this bright yellow buttercup is found often abundantly just below melting ice or snow patches in the mountains. A characteristic field mark is the brown- or black-hairy calyx.

*R. PYGMAEUS* Wahlenb. A small arctic-alpine plant, very rare in the mountains of the central Interior. Seen only on Eagle Summit, nos. 201, 770.

*R. SCELERATUS* L. In ditches near Ester Creek, Fairbanks, no. 202.

*THALICTRUM SPARSIFLORUM* Turcz. In ditches along wooden sidewalks in Fairbanks, no. 210.

*PAPAVER ALASKANUM* Hultén, Fl. Aleut. Isl. 190, tab. 10 (1937). Park, no. 619.

In bloom the middle of June on a sunny exposed spot where the snow had just melted. These were low-growing plants with many old petioles, deeply dissected grayish-green leaves, well covered with stiff hairs, and pale yellow flowers with the central projection of the stigma absent.

*P. MICROCARPUM* DC. A tall, slender, large-flowered, deep yellow poppy, frequent in the hills. Eagle Summit, no. 772; Wiseman, no. 968.

One plant only, very unusual and distinctive, with white petals, bordered by a wide pink band, and with dark green leaves, was collected at Eagle Summit, no. 212.

*CORYDALIS PAUCIFLORA* (Steph.) Pers. A low plant with several large pinkish-lavender spurred flowers, apparently common in the alpine meadows of the Park, no. 620, but rather rare elsewhere in the Interior. It grew also at Eagle Summit (field notes).

*C. SEMPERVIRENS* (L.) Pers. Apparently rare. On a rocky slope behind the R. R. station. Park, no. 213.

*EUTREMA EDWARDSII* R. Br. Collected only near top of Eagle Summit, no. 774.

This circumpolar, arctic species, known usually from the northern coast and the Bering Sea region is rare in the higher mountains of the Interior. See Fernald in Mem. Gray Herb. 2: 337 (1925), for map of general distribution.

*BRASSICA CAMPESTRIS* L. Introduced. Miller House, no. 218.



*RORIPPA BARBAREAEFOLIA* (DC.) Kitagawa in Journ. Jap. Bot. **13**: 137 (1937). In damp places near the mines. Miller House, no. 777.

*R. CURVISILIQUA* (Hook.) Bess. Occasional. Park, no. 223; Rapids, no. 224.

*BARBAREA* ? *PLANISILIQUA* C. A. Meyer. Not well developed. Curry, no. 569.

*CARDAMINE PRATENSIS* L. Not common in the Interior. In damp thicket beside the Savage River, Park, no. 629; Wiseman, no. 1188.

*C. PRATENSIS*, var. *ANGUSTIFOLIA* Hook. Park, no. 628.

*C. PURPUREA* Cham. & Schlecht. This beautiful little arctic plant of Siberia and Alaska grows in masses in moist alpine situations in the mountains of the Interior. Park, no. 627, (white-flowered form) no. 626; Eagle Summit, nos. 226, 779.

*C. BELLIDIFOLIA* L. Rare in the mountains. Eagle Summit, nos. 227, 780.

*C. BELLIDIFOLIA* L., var. *BERINGENSIS* A. E. Porsild in Trans. Royal Soc. of Can. ser. 3, sect. 5, **32**: 31 (1938). This sturdy, vigorous variety with broader and shorter siliques was collected in damp ground on lower slopes of Eagle Summit, no. 781 (listed by Porsild in *RHODORA* **41**: 234 (1939)).

All previous collections are from the islands and nearby shores of Bering Sea. New to the Interior of Alaska.

*LESQUERELLA ARCTICA* (Wormskj.) Wats., var. *SCAMMANAE* Rollins in Am. Journ. Bot. **26**: 421 (1939). A new variety of *L. arctica*, taller in growth, with long slender pedicels and leaves, grew abundantly on a dry, gravelly bank near Gunnysack Creek. It was collected both years in the same place, but not seen elsewhere. *L. arctica* is rare in Alaska, as, with the exception of specimens from the Bering Sea region, it has been reported only from the head of the Chitina River. The TYPE of the new variety is no. 216, Rapids, Aug. 7-10, 1936. The second collection, Rapids, no. 1000.

*THLASPI ARVENSE* L. In waste grounds around roadhouses and cabins. Introduced. Rapids, nos. 217, 1002; Fairbanks, no. 863.

*LEPIDIUM APETALUM* Willd. Fairbanks, no. 864.

*NESLIA PANICULATA* (L.) Desv. Introduced. Fairbanks, no. 1069.

*CAPSELLA BURSA-PASTORIS* (L.) Medic. Observed in several places about settlements, but failed to collect it.

*DRABA ALPINA* L. Seen only once. Park, no. 625. Rare.

*DR. NIVALIS* Lilj. Delicate, tufted, in dry gravels near Savage River. Park, no. 621.

*DR. PRAEALTA* Greene. A Rocky Mountain species. Park, nos. 214-B and 622.

*DR. GLABELLA* Pursh. See Fernald in *RHODORA* **36**: 333 (1934). Common in alpine situations in Interior. Park, no. 214-A; Rapids, no. 215.

*DR. BOREALIS* DC. An Asiatic-Northern Pacific species. Park, no. 623-A.



DESCURAINIA SOPHIOIDES (Fisch.) O. E. Schulz in Engler, Pflanzenr. 4: 105: 316 (1924). Common and abundant in settlements and mining districts. Park, no. 632; Miller House, no. 776; Wiseman, no. 926.

ARABIS LYRATA L., var. KAMCHATICA Fisch. Very common at Seward and along the coast where it was one of the first plants to bloom in the spring, but not seen as often in the Interior. Rapids, nos. 229, 1001.

A. LYRATA L., var. GLABRA (DC.) Hopkins in RHODORA 39: 93-94 (1937). In dry stony places. Park, no. 630; Rapids, no. 228.

A. DIVARICARPA A. Nelson. Probably rare in Alaska in dry sandy places. Along R. R. track from Anchorage to Curry, no. 568; Park, no. 633.

ERYSIMUM CHEIRANTHOIDES L. Very common and of widespread distribution in the central Interior. Probably introduced. Fairbanks, no. 221; Miller House, no. 775; Circle Springs, no. 220; along Yukon River, no. 222; Wiseman, no. 925.

PARRYA NUDICAULIS (L.) Regel. *P. macrocarpa* R. Br. In open woods in the Park, no. 631; Eagle Summit, nos. 225, 778.

A showy plant with large flowers varying from white and pink to lavender and purple. It is popularly called "Wild Stock" in Alaska and is fairly common in Alpine regions in moist tundra. There is considerable variation in the leaves and in the degree of glandular pubescence.

SEDUM ROSEUM (L.) Scop., var. INTEGRIFOLIUM (Raf.) Hultén, Fl. Aleut. Isl. 205 (1937). *Rhodiola integrifolia* Raf. See also Porsild in RHODORA 41: 239-240 (1939). Common throughout the Territory in moist mossy crevices. Park, no. 230; Circle Springs, no. 231. Also seen at Eagle Summit, no. 783.

BOYKINIA RICHARDSONII (Hook.) Gray. This tall conspicuous plant is seen occasionally in damp open ground in subalpine regions. Park, no. 233; Wiseman (in fruit), no. 928.

SAXIFRAGA RIVULARIS L. In wet mossy crevices in the mountains. Rapids, no. 235 (in fruit); Eagle Summit, nos. 234-A, 784.

S. ADSCENDENS L. One specimen resembles closely this cordilleran species. Very rare in Alaska. Eagle Summit, no. 234-B.

S. FOLIOLOSA R. Br. *S. stellaris* L., var. *comosa* Retz. Most of the flowers on the delicate stem are replaced by tiny tufts of green leaves. In wet ground beside a small ditch. Eagle Summit, no. 791.

Probably new to the flora of the Interior.

S. HIERACIFOLIA Waldst. & Kit. Occasional in alpine tundra. Park, no. 638; Circle Springs, no. 236; Eagle Summit, no. 785.

S. REFLEXA Hook. Fl. Bor.-Am. 1: 249, tab. 85 (1840). *S. yukonensis* Small. On a gravelly bank, Park, no. 637.

Apparently rare, as it has been recorded in two other stations only in the Interior.



*S. PUNCTATA* L. sens. lat. Common on moist ledges in the Eagle Summit region, nos. 237, 238, 786; almost at the very top of Porcupine Dome, no. 787.

This group is very variable. See Hultén, Fl. Aleut. Isl. 213–214 (1937) and Sv. Bot. Tidskr. 30, 3: 324, fig. 5 (1936). Most of my specimens have the inflorescence more open, dark purple capsules and purplish-tinged leaves and scape, as in ssp. *insularis* Hultén.

*S. TRICUSPIDATA* Rottb. Common on dry ledges in all the subalpine regions where I collected. Sometimes forming large mats over rocks, and readily separated from the next species by the rigid leaves with three sharp teeth. Park, nos. 239, 636; Rapids, no. 1003; Miller House, no. 788; Wiseman, no. 929.

*S. BRONCHIALIS* L. ssp. *FUNSTONII* (Small) Hult. Fl. Kamtch. 3: 12–17 (1929). Fairly common also in stony places. Park, no. 636-A; Eagle Summit, nos. 240, 789; Wiseman, no. 930.

*S. ESCHSCHOLTZII* Sternb. Rapids, no. 1041.

This dwarf caespitose *Saxifraga* of Asiatic-Western American distribution is rarely found. Probably the second record for the Interior.

*S. FLAGELLARIS* Willd. Occasional in the mountains of the Interior. In a swampy meadow in Park, nos. 241, 635; Wiseman, no. 931.

The specimens in the two collections differ considerably. No. 931 has a much larger single flower with very long flagella.

*S. HIRCULUS* L. Park, no. 242; Eagle Summit, nos. 243, 790.

A common and beautiful Saxifrage, with large bright yellow flowers, the petals usually red-spotted, growing in wet boggy places in the mountains.

*S. OPPOSITIFOLIA* L. This well-known circumpolar species seemed to be surprisingly rare in the central Interior. Park, no. 634.

*PARNASSIA PALUSTRIS* L., var. *NEOGAEA* Fernald in *RHODORA* 39: 310–312 (1937). Common and abundant throughout the region, except in the higher altitudes. Park, no. 247; Rapids, no. 1004; Big Delta, no. 250; Fairbanks, no. 1070 (a freak form); Miller House, no. 793; Circle Springs, no. 249; Wiseman, nos. 248, 932.

Prof. Fernald has described in detail, with plates, the differences between the American plant and the head form. Several of my specimens, especially those from Wiseman, seem to show transitional forms between the variety and the typical form of the species.

*P. KOTZEBUEI* Cham. & Schlecht. Found often in damp thickets in sub-alpine regions. Miller House, no. 792; Eagle Mining Camp, no. 695; Circle Springs, no. 251; Wiseman, no. 1189.

*RIBES TRISTE* Pall. Occasional. Wiseman, no. 927.



*SPIRAEA BEAUVERDIANA* Schneid. See Hultén, Fl. Kamtch. 3: 38–41 (1929). *S. betulifolia* Am. auth., non Pall.; *S. Stevenii* (Schneid.) Rydb. Very common along roadsides, in thickets, and dry tundra throughout. Miller House, no. 794; Circle Springs, no. 253; Wiseman, no. 933.

*RUBUS IDAEUS* L., var. *CANADENSIS* Richardson. A delicious wild raspberry common in thickets of the Interior. Miller House, no. 796; Circle Springs, no. 254.

*R. CHAMAEMORUS* L. The Cloudberry or Baked-apple Berry is abundant in moist tundra and peat bogs throughout. Park, no. 640; Miller House, no. 795; Circle Springs, no. 255; Wiseman, no. 934.

*R. ACAULIS* Michx. In moist ground near Savage River. Park, no. 639.

*R. ARCTICUS* L. Wiseman, nos. 935, 935-A.

The specimens from Wiseman seem to belong here, although *R. arcticus* and *R. acaulis* are confusing and critical in Alaska. Stems leafy, calyx-lobes densely pubescent, petals obovate and less clawed.

*FRAGARIA YUKONENSIS* Rydb. A small-fruited strawberry with long runners, common on banks of sloughs. Fairbanks, no. 1072.

*POTENTILLA NORVEGICA* L. Common in low ground. Miller House, no. 798; Fairbanks, no. 260; Wiseman, no. 937.

*P. NIVEA* L. See Hultén, Fl. Kamtch. 3: 68–69 (1929) for discussion of this and *P. uniflora*. Occasional. Park, no. 642; Rapids, no. 261.

*P. UNIFLORA* Ledeb. On bare rocky places in the mountains. Not common. Park, no. 641; Wiseman, no. 936.

*P. PENNSYLVANICA* L. Sandy banks of rivers. Rapids, nos. 262, 1010; Eagle on the Yukon, no. 263.

*P. NUTTALLII* Lehm. Eagle, no. 264; Along Yukon River, no. 265.

*P. GRACILIS* Dougl. New to interior of Alaska. Wiseman, no. 938.

*P. BIFLORA* Willd. On the slopes of Porcupine Dome, no. 800.

A tufted alpine *Potentilla*, very characteristic, with thick woody caudex, leaves with linear divisions, calyx-lobes and bractlets of a reddish tinge, as is also the stem, and pale yellow petals. According to Wolf it has a wide range from the Himalayas and mountains of Central Asia to arctic regions of eastern Asia and Western N. A., but is nowhere common. It has been collected at Cape Thompson, and several places on the Seward Peninsula, but this, a far inland station, is the first record for the Interior.

*P. ELEGANS* Cham. & Schlecht. in *Linnaea* 2: 22 (1827); Ledeb. Fl. Ross. 2: 56; Lehmann, Rev. *Potentill.* 53, fig. 1 (1856); Wolf, Monogr. Gatt. *Potentilla*, 532 (1908). Amid rock fragments on the bare, wind-swept top of Porcupine Dome, no. 801 (flowers and fruit). The first record for Interior Alaska, and the second for the North American continent.



The finding of this dainty, low, tufted Asiatic *Potentilla*, with caudex crowded with persisting brown stipules, three-foliolate leaves, hairy calyx, and pale yellow petals, a little longer than the sepals, was a happy experience of the summer. At home in the mountains of Siberia and north-western Mongolia, it was collected once before by Thornton, in the Sawtooth Range on Seward Peninsula, and reported by Porsild, *RHODORA* **41**: 246 (1939). Its closest relative is *P. Robbinsiana* Oakes, a rare endemic of the White Mountains, N. H.

*P. EGEDII* Wormsk., var. *GROENLANDICA* (Tratt.) Polunin in *RHODORA* **41**: 40 (1939). *P. pacifica* Howell. Very common along the Yukon River, nos. 270, 271 (very silvery hairy); Rampart, no. 269.

*P. PALUSTRIS* (L.) Scop. *Comarum palustre* L. In wet places, Paxson, no. 267.

*P. FRUTICOSA* L. This shrubby *Potentilla*, known in the Interior as "Tundra Rose," is one of the most abundant and characteristic plants in the region. In lowlands, beside roads, in dry tundra, and in sub-alpine locations. Fairbanks, no. 1071; Miller House, no. 799; Wiseman, no. 268. Also common in Park (field notes).

*GEUM MACROPHYLLUM* Willd., var. *PERINCISUM* (Rydb.) Raup in *RHODORA* **33**: 172-176 (1931). Common around settlements. Fairbanks, no. 275; Circle Springs, no. 274.

*G. ROSSII* (R. Br.) Sér. *Sieversia Rossii* R. Br. A beautiful plant, abundant in wet, springy ground, in the higher mountains; often below snow patches. Eastern Asiatic-Western American. Park, no. 643; Eagle Summit, no. 802-A; slopes of Porcupine Dome, no. 802.

*SANGUISORBA OFFICINALIS* L. *S. microcephala* Presl, according to Rydb. in *N. Am. Fl.* **22**<sup>4</sup>: 387 (1908). Along the banks of rivers. Tanana, no. 285.

Both Hultén and Porsild think the American plant should not be separated.

*S. SITCHENSIS* C. A. Meyer. Not seen north of the Alaska Range. Beside a brook in the woods above Rapids, nos. 284, 1011.

*S. ? MENZIESII* Rydb. Form with oblong spikes and purple calyx. In same places as above. Rapids, nos. 286 and 1011-A.

*DRYAS DRUMMONDII* Richards. Occasional in gravel bars along rivers. Park, no. 277. Abundant in large mats along the paths of the village, mostly with the striking feathery akenes, as it was in August, but several with the low-stemmed nodding yellow flowers. Wiseman, nos. 278, 941.

*DR. OCTOPETALA* L. Very common in dry, stony places in the mountains. Growing so closely in thick mats that the ground looks as though covered by snow patches. Park, no. 645; Rapids, nos. 282, 1012; Eagle Summit, nos. 281, 803.

*DR. INTEGRIFOLIA* M. Vahl. Not as frequent as the preceding species. In gravels in the mountains. Park, nos. 279, 644.



DR. INTEGRIFOLIA M. Vahl, var. SYLVATICA Hultén in Sv. Bot. Tidskr. 30, 3: 527, fig. 2a (1936). Below Ft. Yukon on wooded bank, no. 280; Wiseman, in woods, no. 940.

ROSA ACICULARIS Lindl. Very common everywhere except in the high mountains. Fairbanks, nos. 287, 1057; along Yukon River, no. 288; Wiseman, no. 942. Also at Miller House, but did not collect it there.

The beautiful wild rose of Alaska, with very prickly stems, pyriform fruit, and large fragrant flowers.

TRIFOLIUM PRATENSE L. Introduced. Fairbanks, no. 1079.

T. HYBRIDUM L. Introduced. Fairbanks, no. 1078.

MEDICAGO LUPULINA L. Miller House, no. 811.

LUPINUS ARCTICUS Wats. Common on dry sandy slopes throughout the region. In open woods in the Park, nos. 289, 646; Circle Springs, no. 290.

ASTRAGALUS FRIGIDUS (L.) Gray, var. LITTORALIS (Hook.) Wats. Occasional in subalpine locations. Park, no. 649; Miller House, nos. 293, 804.

A. ALPINUS L. Generally common. Park, no. 648; Rapids, no. 292; Fairbanks, no. 690; Wiseman, no. 943.

A. YUKONIS Jones, Revision of N. A. Astragalus, p. 89 (1923). Tanana, along the Yukon River, no. 294. Possibly the first record for Alaska.

This weak-stemmed, much branched *Astragalus*, with flowers capitate in bloom and pods ascending, is very rare in herbaria. It was described from specimens found by Gorman near Ft. Selkirk, Yukon Territory. Later collected by Eastwood at Whitehorse, and recently by Raup on the Athabaska.

A. FALCIFERUS Hult. *Gynophoraria falcata* Rydb. See Hultén in Sv. Bot. Tidskr. 30, 3: 526. Rare. On rock pile near Sable Pass, Park, no. 647.

Second report for Alaska.

OXYTROPIS MAYDELLIANA Trautv. *O. campestris* DC., var. *melanocephala* Hook. Rare in the high mountains of the Interior. Eagle Summit, no. 805; on way down from Porcupine Dome, no. 805-A.

Characterized by chestnut-colored stipules.

O. MERTENSIANA Turcz. Porcupine Dome, no. 809.

A distinctive eastern Asiatic species, very rare in the Interior, probably the first station, but reported previously twice from Seward Peninsula. The third record for Alaska.

O. ARCTICA R. Br. Eagle Summit, no. 806; Porcupine Dome, no. 807.



*O. PYGMAEA* (Pall.) Fernald in *RHODORA* **30**: 153 (1928). Occasional in the mountains. Park, no. 650; Eagle Summit, no. 808.

*O. HUDSONICA* (Greene) Fernald. Near Polychrome Pass, Park, no. 651.

A plant with a strong tap-root, leaflets 18 or more, usually attenuate, and very glandular calyx.

*O. GRACILIS* (A. Nels.) K. Schum. Fairly common. Park, no. 295; Rapids, no. 296; Wiseman (in fruit), no. 945.

*O. DEFLEXA* (Pall.) DC. Wiseman, no. 944.

This specimen has truncate calyx-tubes, with broad, rectangular sinuses between short teeth. It is, therefore, the true Siberian *O. deflexa*, not *O. retrorsa* Fernald, the American plant which formerly passed in America as *O. deflexa*. See *RHODORA* **30**: 140 (1928). *O. retrorsa* has lanceolate, approximate calyx-lobes and acute sinuses. Second record for Alaska.

*HEDYSARUM ALPINUM* L., var. *AMERICANUM* Michx. A variable species, very common along sloughs and creeks throughout the Interior. Park, nos. 304, 653; Rapids, nos. 302, 1018; Fairbanks, nos. 301, 689; Miller House, no. 810; Circle Springs, no. 300; along Yukon River, no. 303; Wiseman, no. 947.

*H. MACKENZII* Richards. Occasional in thickets along rivers and streams. Rapids, no. 1017; Wiseman, nos. 306, 946.

*GERANIUM ERIANTHUM* DC. Not seen north of the Alaska Range. Curry, no. 566.

*LINUM LEWISII* Pursh. Fairbanks, no. 865.

*EMPETRUM NIGRUM* L. The Crowberry is abundant in heaths and bogs, especially in subalpine regions. Park, no. 308; Rapids, no. 1022; Miller House, no. 812; Circle Springs, no. 309; Wiseman, nos. 310, 948.

*VIOLA BIFLORA* L. The *Violas* are among the rarest plants of the Interior. This yellow-flowered species was collected but once, in a willow thicket on a slope back of the ranger cabin at Igloo, Park, no. 654.

*V. ? PALUSTRIS* L. In swamps, Circle Springs, no. 312; Fox near Fairbanks, no. 313.

Not sufficient material to be sure of this. Collected *V. epipsila* Ledeb. in Seward on the southwestern coast, but did not see it in the Interior.

*SHEPHERDIA CANADENSIS* (L.) Nutt. The "Soap berry" is common in open woods and thickets along streams. Park (in bloom), no. 655; Fairbanks, no. 315; Circle Springs, no. 314; Wiseman, no. 949.

*CIRCAEA ALPINA* L. Circle Hot Springs, no. 327.

Apparently the second record from the Interior. Porsild reports it from Tanana Hot Springs, in *RHODORA* **41**: 263 (1939).



*EPILOBIUM ANGUSTIFOLIUM* L. *Chamaenerion angustifolium* (L.) Scop. The Fire-weed is, doubtless, the most spectacular plant in Alaska, covering entire hills and meadows with a rose-magenta blanket. It also fringes both the Richardson and Steese Highways. Paxson, no. 316; Fairbanks, no. 1060; Wiseman, no. 950.

*E. ANGUSTIFOLIUM*, forma *ALBIFLORUM* (Dumort.) Haussk. Occasional. Wiseman, no. 318.

*E. ANGUSTIFOLIUM*, forma *SPECTABILE* (Simmons) Fern. Miller House, no. 813.

*E. LATIFOLIUM* L. *Chamaenerion latifolium* (L.) Sweet. The large-flowered "River Beauty," as it is sometimes called in Alaska, is often found on gravel bars in rivers and creeks in subalpine regions. For map of general distribution see Fernald in Mem. Gray Herb. 2: 337 (1925). Park, no. 320; Miller House, no. 814; Wiseman, nos. 321, 951, (a pale pink form) no. 952.

*E. LATIFOLIUM* L., var. *KAMTSCHATICUM* Haussk. Park, no. 323; Wiseman, no. 953.

*E. PALUSTRE* L. In wet ground by a creek. Miller House, no. 815.

*E. GLANDULOSUM* Lehm. A northern station for this species. Circle Hot Springs, no. 324.

*BUPLEURUM AMERICANUM* Coult. & Rose. Common in dry gravels. Park, no. 329; along Yukon River, no. 330; Wiseman, no. 954.

*CONIOSELINUM CNIDIIFOLIUM* (Turcz.) Porsild in RHODORA 41: 267-268 (1939). *C. dawsoni* Coult. & Rose. On the bank of the Chena Slough, Fairbanks, no. 1081; along Yukon River, no. 333.

*HERACLEUM LANATUM* Michx. This very tall, large plant grew in a woody thicket back of Gunnysack Creek, Rapids, no. 332.

Did not see it farther north.

*CORNUS CANADENSIS* L. Common in wooded areas, also in damp open places. Rapids, no. 1021; Fairbanks, nos. 337 and 691; Miller House, no. 335; Circle Springs, no. 334.

*C. CANADENSIS* L., var. *INTERMEDIA* Farr. *C. unalaschkensis* Ledeb.; *C. canadensis* × *suecica* Hult. Fl. Aleut. 253-254 (1937). See also Porsild in RHODORA, 41: 270 (1939). Occasional. Park, no. 656; near Donnelly Dome on Richardson Highway, no. 339; Circle Springs, no. 338.

*C. STOLONIFERA* Michx., var. *BAILEYI* (Coulter & Evans) Drescher. A common shrub in the Yukon Valley and central interior region. Fairbanks, no. 342; Circle Springs, no. 341.

*MONESSES UNIFLORA* (L.) Gray. In moist woods. Park, no. 344.

*M. UNIFLORA*, var. *RETICULATA* (Nutt.) Blake. Rapids, nos. 345, 1020.

*PYROLA SECUNDA* L. A wooded ravine, Wiseman, no. 956.

*P. SECUNDA* L., var. *OBTUSATA* Turcz. Rich woods, Rapids, no. 1019; Paxson, no. 349; Circle Springs, no. 348.

*P. GRANDIFLORA* Radius. Circle Springs, no. 351.



*P. GRANDIFLORA*, var. *CANADENSIS* (Andres) A. E. Porsild. Wiseman, no. 955-B.

*P. GRANDIFLORA*, var. *GORMANII* (Rydb.) A. E. Porsild. Common in open spruce woods near Savage River, Park, no. 657; Eagle Summit, no. 817. See Porsild, *RHODORA*, 41: 271–273 (1939), for discussion of this species and varieties.

*P. ASARIFOLIA* Michx., var. *INCARNATA* (DC.) Fern. in *RHODORA* 6: 178 (1904). Wiseman, no. 955-A.

*LEDUM GROENLANDICUM* Oeder. The Labrador Tea is very common in muskegs in the central Interior. Fairbanks, no. 355; Circle Springs, no. 354; Wiseman, no. 957.

*L. PALUSTRE* L., var. *DECUMBENS* Ait. *L. decumbens* (Ait.) Small. A dwarf, more northern species, with narrowly linear leaves, growing in the mountains. Park, no. 658; Eagle Summit, nos. 356, 820.

*RHODODENDRON LAPPONICUM* (L.) Wahlenb. Occasional on alpine slopes and also on the banks of the Savage River in the Park, no. 664.

*LOISELEURIA PROCUMBENS* (L.) Desv. The little "Alpine Azalea" is found occasionally on bare mountain slopes. Park, no. 659; Eagle Summit, no. 818; Circle Springs, no. 357.

*CASSIOPE TETRAGONA* (L.) D. Don. Very common and widespread on mossy ledges and alpine summits. Park, nos. 361, 660; Eagle Summit, no. 362; Wiseman, no. 958.

*ANDROMEDA POLIFOLIA* L. Common in peat bogs and tundra throughout. Fairbanks, no. 363; Eagle Summit, no. 819; Wiseman, no. 959.

*CHAMAEDAPHNE CALYCVLATA* (L.) Moench. In low bogs. Fairbanks, no. 365; Circle Springs, no. 364; Wiseman, no. 960.

*ARCTOSTAPHYLOS UVA-URSI* (L.) Spreng. Bearberry or Kinnikinick is found now and then on dry bare slopes. Park, no. 661; Circle Springs, no. 366; Wiseman, no. 961.

*A. RUBRA* (Rehder & Wilson) Fernald. *A. alpina* (red-fruited form) of Richards. Very common in this region. Circle Springs, no. 367; Wiseman, no. 962.

The thin, deciduous leaves turn scarlet in the fall, causing the hills and lower mountain slopes of central Alaska to become masses of brilliant color.

*VACCINIUM ULIGINOSUM* L. The highly-prized blueberry of the Interior. Common in heaths and tundra. Fairbanks, no. 368; Wiseman, no. 963.

*V. ULIGINOSUM* L., var. *ALPINUM* Bigel. In alpine situations. Park, no. 662; Wiseman, no. 963-a.

*V. VITIS-IDAEA* L., var. *MINUS* Lodd. Common on dry slopes. Park, no. 663 (in flower); Circle Springs, no. 369; Wiseman, no. 964 (in fruit).

*DIAPENSIA OBOVATA* (Fr. Schmidt) Nakai in Nakai and Koidzumi, *Trees and Shrubs of Japan proper*, 194 (1922). *D. lapponica* L., var.



*obovata* Fr. Schmidt. Rather rare on mountain ledges. Top of Polychrome Pass, in Park, no. 665; rocky cliff above the Lodge, Rapids, no. 371; Eagle Summit, no. 821.

See Porsild in Trans. Royal Soc. of Can., ser. 3, sect. 5, **32**: 35 (1938), for discussion of *D. obovata* and *D. lapponica*. *D. obovata*, loosely caespitose with trailing branches, and of a reddish-green tinge, with short, thick styles is of Eastern Asiatic-Western American distribution, and all records west of the Mackenzie should be referred to it according to Porsild.

DOUGLASIA GORMANII Constance in Am. Midland Naturalist, **19**: 257 (1938). A tiny caespitose plant with several rose-purplish flowers was found on a bare summit near Polychrome Pass in the Park, on June 20th, no. 675.

This very rare little plant I put with some hesitation here. The backs of the leaves are pubescent with forked hairs and the margins not definitely ciliolate, which corresponds to Constance's description. But specimens of this and *D. arctica* Hook. are so rare in herbaria that it is difficult to make determinations without more material. *D. arctica*, a rare arctic plant of the region west of the Mackenzie, is known in Alaska only by a sheet from Bering Strait. The type of *D. Gormanii*, and one other collection mentioned by Constance, are from Yukon River Valley and Lake Kluane in Yukon Territory respectively, so this is the first record for Alaska.

ANDROSACE CHAMAEJASME Host, var. ARCTICA R. Knuth. ?*A. Lehmanniana* Spreng. Occasional in sandy places. Near Savage River Camp, Park, no. 667.

A. SEPTENTRIONALIS L. *A. Gormanii* Greene. Rare. Dry cliff back of R.R. station in Park, no. 687.

DODECATHEON FRIGIDUM Cham. & Schlecht. A beautiful western-arctic "Shooting Star," common in wet, springy ground in high alpine regions of the Interior. Park, nos. 372, 666; Eagle Summit, nos. 373, 822.

TRIENTALIS EUROPAEA L., var. ARCTICA (Fisch.) Ledeb. Along the wooded bank of the river at Curry, nos. 572, 573.

No. 573 has narrow, acute leaves instead of broad and obtuse, and lanceolate petals. Also seen in a willow thicket in Fairbanks.

GENTIANA PROPINQUA Richards. See Hooker, Fl. Bor.-Am. **2**: 62, tab. 150 (1840). Twelve Mile, on Steese Highway, no. 377; Wiseman, nos. 376, 965.

These two collections are true *G. propinqua*, tall, but delicate stems, purplish, many branched, with a slender corolla, 10-15 mm. long, and generally short, very unequal calyx-lobes.



Other collections—Park, no. 375; Rapids, no. 1024; Miller House, no. 379; Circle Springs, no. 378—show much stouter plants with stem and leaves yellowish-green, cauline leaves more connate-clasping and calyx-lobes longer and united in a tube. Although they are different from typical *G. propinqua*, they can not be satisfactorily placed in any other species.

*G. PROSTRATA* Haenke. This low-growing, often almost prostrate Gentian with small blue flowers is found only occasionally in damp ground in the mountains. Park, no. 380; Rapids, no. 381.

*G. GLAUCA* Pall. A rare alpine plant with corolla of a strange shade of greenish-blue, growing in moist places on high mountains. Park, no. 382; Eagle Summit, nos. 383, 823.

*SWERTIA PERENNIS* L., var. *OBTUSA* (Ledeb.) Griseb. Collected only once, in the Alaska Range, beside a brook at Paxson, no. 384.

*LOMATAGONIUM ROTATUM* (L.) Fries, forma *TENUIFOLIUM* (Griseb.) Fernald in *RHODORA* 21: 197 (1919). *Pleurogyne rotata* (L.) Griseb.  $\beta$ . *tenuifolia* Griseb. Occasional in marshy ground in the Interior. Fairbanks, no. 385; Wiseman, no. 966.

*POLEMONIUM ACUTIFLORUM* Willd. Very common in damp meadows throughout the region. Park, no. 668; lower slope of Eagle Summit, nos. 386, 825; Tanana, no. 387.

*P. PULCHERRIMUM* Hook. Circle Springs, no. 388.

*PLAGIOBOTHRYIS CUSICKII* (Greene) Johnston. Introduced, Fairbanks, no. 1080-a.

*P. COGNATUS* Johnston. Dry ground, Fairbanks, no. 1080.

*AMSINCKIA MENZIESII* (Lehm.) Nels. & Macbride. Probably introduced. Rapids, nos. 395, 1023.

*ERITRICHIMUM ARETIOIDES* (Cham. & Schlecht.) DC. Eagle Summit, no. 826-A; Porcupine Dome, no. 826.

A charming little fuzzy plant of the high mountains, with a rosette of hairy leaves at the base, rising from a woody root covered with brown leaves; the flowers in a capitate head, blue with a yellow eye, and very fragrant.

*MYOSOTIS ALPESTRIS* Schmidt, ssp. *ASIATICA* Vestergr. Twelve Mile Summit on the Steese Highway, no. 392; Wiseman, no. 967.

The "Forget-me-not" is the Territorial flower, found in alpine meadows, and moist ledges of the mountains.

*MERTENSIA PANICULATA* (Ait.) G. Don. One of the most conspicuous and graceful plants of open woods, common throughout the Interior. Curry, no. 567; Park, no. 669; Paxson, no. 397; Miller House, no. 827; Eagle, on the Yukon, no. 399.

*STACHYS SCOPULORUM* Greene. *S. palustris* L., subsp. *pilosa* (Nutt.) Epling. Fairbanks, no. 866.



SCUTELLARIA EPILOBIIFOLIA Hamilton. See Fernald in RHODORA 23: 86 (1921). Fairbanks, no. 401.

MENTHA CANADENSIS L., var. GLABRATA Benth. In swampy land, beside the hot springs, Circle Springs, no. 404.

PRUNELLA VULGARIS L., var. LANCEOLATA (Barton) Fernald, forma IODOCALYX Fern. in RHODORA 15: 179-186 (1913). Fairbanks, no. 403.

LINARIA VULGARIS Hill. In waste land, probably a garden escape. Fairbanks, nos. 405, 1058.

VERONICA ALPINA L., var. UNALASCHCENSIS Cham. & Schlecht. *V. Wormskjoldii* Roem. & Schult. Rare. A mossy slope at Twelve Mile Summit, on Steese Highway, no. 408. See Fernald in RHODORA 41: 450 (1939).

*V. PEREGRINA* L. Waste land. Fairbanks, no. 1068.

LAGOTIS GLAUCA Gaertn., var. LANCEOLATA Hult. Fl. Kamtch. 4: 105 (1930). Rare. Near snow patch on Eagle Summit, no. 836.

CASTILLEJA HYPERBOREA Pennell in Proc. Acad. Nat. Sci. Phil. 86: 532 (1934). Eagle Summit, nos. 411 and 828.

*C. PALLIDA* (L.) Spreng., subsp. CAUDATA Pennell. Rapids, no. 1025. One specimen of this collection is yellow-villous and very glandular. Circle Springs, no. 413; Wiseman, no. 412.

*C. SP.* Other collections of *Castilleja* await further study.

EUPHRASIA MOLLIS (Ledeb.) Wettst. In a low thicket on a hill behind the Lodge, Rapids, nos. 416, 1026.

*E. SUBARCTICA* Raup in RHODORA 36: 87-88 (1934). Fairbanks, no. 868.

PEDICULARIS VERTICILLATA L. Occasional in subalpine regions. Park, no. 417; Rapids, no. 418; Wiseman, no. 972.

*P. LABRADORICA* Wirsing. Common on dry hillsides, not usually in high altitudes. Park, nos. 419, 672; Miller House, no. 831; Circle Springs, no. 420; Wiseman, no. 971.

*P. SUDETICA* Willd. Fairly common in tundra. Miller House, no. 829; along road to Eagle Summit, no. 422.

*P. OEDERI* Vahl. Abundant in wet ground below snow banks at base of Eagle Summit, but not seen elsewhere, nos. 421, 833.

*P. LANGSDORFFII* Fisch. Park, no. 670; Eagle Summit, nos. 423, 834.

A striking alpine *Pedicularis* with tall thick pink spikes. Rarely reported from the Interior.

*P. LANATA* Cham. & Schlecht. Rare. Eagle Summit, nos. 424, 832.

Reported by Porsild in RHODORA 41: 287 (1939), from the Alaska Range. Probably second record for the Interior.

*P. CAPITATA* Adams. On dry stony slopes, occasional in alpine regions. Park, no. 671; Eagle Summit, nos. 425, 830.

BOSCHNIAKIA ROSSICA (Cham. & Schlecht.) B. Fedtsch. Rapids, no. 427; Wiseman, no. 973, where it was very abundant.



A strange looking plant, parasitic on roots of alder and spruce, growing in woods and thickets. It has a wide distribution in Alaska, as I saw it also in Seward. The Eskimo children called the plants "corn pipes."

*PINGUICULA VULGARIS* L. Many of the leaf rosettes were seen in a marsh in Wiseman, but I failed to collect them.

*PLANTAGO MAJOR* L., var. *ASIATICA* (L.) Decaisne. Circle Springs, no. 428.

*GALIUM BOREALE* L. Very common in dry soil on banks of streams and rivers in low areas. Fairbanks, no. 867; Circle Springs, no. 431.

A tall, showy Galium with many white flowers in compact panicles.

*G. TRIFIDUM* L. In moist places near Circle Hot Springs, no. 434.

*VIBURNUM PAUCIFLORUM* Raf. Very common in thickets along rivers. Rapids, no. 1016; Circle Springs, no. 439.

The red fruit of this tall straggling shrub, often called "High-bush Cranberry," is much prized for jellies and pies.

*LINNAEA BOREALIS* L. Specimens from Wiseman, nos. 437 and 974, belong to the typical form. See Fernald in *RHODORA* 24: 210 (1922).

*L. BOREALIS* L., var. *AMERICANA* (Forbes) Rehder. Plants from Miller House, no. 837, have the funnel-shaped corollas. Common in rich woods and shaded thickets.

*VALERIANA CAPITATA* Pall. A common characteristic plant of moist meadows and subalpine tundra. Park, nos. 441, 674; Wiseman, no. 975.

*CAMPANULA LASIOCARPA* Cham. A handsome alpine species, called familiarly "Bluebells," growing in large clumps in gravelly soil. Common in the Interior. Park, no. 442; Rapids, no. 444; Eagle Summit, nos. 443, 839; Wiseman, no. 976.

*C. UNIFLORA* L. Rare in the mountains, but no doubt easily overlooked. My only collection was from Eagle Summit, no. 840.

*SOLIDAGO MULTIRADIATA* Ait. The most common and abundant Solidago with wide-spread distribution in dry soil. Park, no. 445; Rapids, no. 448, 1033; Circle Springs, no. 447; Wiseman, nos. 446, 977.

*S. DECUMBENS* Greene, var. *OREOPHILA* (Rydb.) Fernald in *RHODORA* 38: 201-204 (1936). Occasional on sandy banks. Miller House, no. 841; Eagle, on Yukon River, no. 449.

*S. LEPIDA* DC., var. *ELONGATA* (Nutt.) Fernald in *RHODORA* 17: 8-10 (1915). Along the Chena River, Fairbanks, nos. 451, 870.

Apparently the second record for the Interior.

*ASTER JUNCEUS* Ait. Circle Springs, no. 455.

Reported but twice previously from Alaska.

*A. SIBIRICUS* L. Very common throughout the region, especially on sandy banks of streams. Park, no. 453; Rapids, no. 1027; Fairbanks, no. 1059; along Yukon River, no. 454; Wiseman, nos. 456, 978.



ERIGERON ELATUS Greene. *E. acris* L., var. *arcuans* Fernald. See RHODORA 40: 347 (1938). Wiseman, no. 980.

*E. ANGULOSUS* Gaudin, var. *KAMTSCHATICUS* (DC.) Hara in RHODORA 41: 389. *E. elongatus* Ledeb. *E. acris* L., var. *asteroides* of Am. Auth. Very common in subalpine regions. Rapids, nos. 458, 1028; Miller House, no. 843; Wiseman, nos. 457, 979.

*E. LONCHOPHYLLUS* Hook. In a sandy location not far from the Chena River, no. 1064.

Apparently rare, as only other reports are from Fairbanks.

*E. COMPOSITUS* Pursh, var. *TRIFIDUS* (Hook.) Gray. Probably occasional in high mountains. On a rock pile near Sable Pass in Park, no. 676-a.

Tufted with finely cut leaves and white flowers.

*E. SALSUGINOSUS* (Richards.) Gray. Along the Yukon River in thickets, Tanana, no. 460.

*E. CAESPITOSUS* Nutt. Along the Yukon River, no. 461.

*E. RADICATUS* Hook. Park, no. 676; Eagle Camp, nos. 459, 696.

Low, caespitose, with strong tap-root, growing in rocks. Similar in appearance, but in the Park specimen the leaves are less linear and inclined to be slightly lobed and base of heads more villous.

ANTENNARIA PHILONIPHA A. E. Porsild in RHODORA 41: 294, pl. 554 (1939). Park, no. 678.

This alpine species, recently named and described, differs from *A. monocephala*, its nearest relative, according to Porsild l. c. "by the thinner tomentum of leaves, the elongated offsets, tall and slender stems and by the larger pistillate heads." It has a wide range from the Bering Sea, the mountains of interior Alaska and Yukon Territory to the Arctic coast east of Mackenzie.

*A. ALASKANA* Malte in RHODORA 36: 107 (1934). Rare in bleak, exposed gravelly places on high mountains. Eagle Summit, no. 464; on the very top of Porcupine Dome, no. 845.

*A. LAINGII* A. E. Porsild in RHODORA 41: 293 with pl. 554 (1939). Dry gravelly location near the Savage River, Park, no. 677 (mentioned by Porsild).

"By its densely matted growth, the very leafy stems and compact glomerulate ivory-white heads, it differs strikingly from all other boreal Antennarias" Porsild l. c. The TYPE was collected by *H. M. Laing* at the head of the Chitina River. My specimens constitute the second record for this species.

*A. PULCHERRIMA* (Hook.) Greene. This attractive Antennaria, often 15 inches high, grew abundantly in low open woods near the Koyukuk River, Wiseman, nos. 463, 982.



Rarely reported from Alaska. This is probably the second record.

*ACHILLEA BOREALIS* Bong. Very common throughout the Interior, especially along rivers. Rapids, nos. 468, 1036; Fairbanks, no. 1063; Rampart, on the Yukon, no. 469.

*A. OCCIDENTALIS* Raf. Fairbanks, no. 1061.

*A. SIBIRICA* Ledeb. *A. multiflora* Hook. Occasional on river banks. Fairbanks, no. 1062.

Leaves only pinnately divided.

*MATRICARIA MATRICARIOIDES* (Less.) Porter. *M. suaveolens* (Pursh) Buch. Common around settlements. Fairbanks, no. 475; Wiseman, no. 987.

*ARTEMISIA BOREALIS* Pall. Found growing plentifully on a steep, rocky hill near Gunnysack Creek, Rapids, nos. 447, 1034. A rare species in interior Alaska.

*A. ARCTICA* Less. Common on damp, mossy ledges of high mountains. An Asiatic-Western American species. Eagle Summit, nos. 478, 846; Porcupine Dome, no. 847.

*A. FRIGIDA* Willd. Occasional on dry hillsides. Fairbanks, no. 1066.

*A. ALASKANA* Rydb. in N. A. Flora **34**: 281 (1916). Gravel bars of a creek in Wiseman, no. 984.

These match the photograph of Rydberg's TYPE SPECIMEN in Gray Herbarium, collected by I. C. Russell on Yukon River between Nulato and Nowikakat, July 23–27, 1889. The second report for this species.

*A. TILESII* Ledeb. sens. lat. Very variable. Several specimens resemble var. *UNALASCHCENSIS* Besser (var. *elatior* Torr. & Gray). Common around roadhouses and towns. Park, no. 480; Rapids, nos. 482, 1035; Miller House, no. 848; Wiseman, nos. 481, 983.

*PETASITES FRIGIDUS* (L.) Fries. Common in alpine meadows and tundra. Park (in flower), no. 685; Wiseman (basal leaves only), no. 988.

*ARNICA ATTENUATA* Greene. A tall plant with strongly attenuated leaves, common in thickets and on dry hillsides in subalpine regions. Park, no. 681; Miller House, no. 849; along Yukon River, no. 483.

*A. LOUISEANA* Farr. Park, no. 679; on slopes of Eagle Summit, no. 850.

A Cordilleran species found at Lake Louise and other locations in the Canadian Rockies, in the mountains of interior Alaska, and the Gaspé Peninsula and western Newfoundland. See Fernald in *RHODORA* **35**: 368, pl. 270 (1933).

*A. LESSINGII* Greene. See Hultén, Fl. Kamtch. **4**: 193, pl. 6 (1930). Close beside the preceding species on Eagle Summit, nos. 486, 851. Also in the Park, no. 485.



An Asiatic-Western American Arnica, with pale yellow ligules, brownish pappus and nodding heads.

A. sp.? Resembles *A. Louiseana*, but the rays unusually long for that species. Miller House, no. 850-a.

SENECIO VULGARIS L. Probably introduced. Rapids, no. 1030.

S. PALUSTRIS (L.) Hook. In wet places in the mining dumps after the ground has been thawed by water pipes. Fox and Ester Creeks near Fairbanks, no. 488.

Conspicuous and tall, often 3 to 4 feet high.

S. LUGENS Richards. Abundant in thickets, along roadsides in lowlands and subalpine regions. Park, no. 492; Rapids, nos. 493, 1032; Fairbanks, no. 494; Miller House, no. 853; Wiseman, no. 985.

Tall and weedy, characterized by the black-tipped bracts of the involucre.

S. PAUPERCULUS Michx. Fairbanks, no. 491.

S. FRIGIDUS (Richards.) Less. *Cineraria frigida* Richards. Occasional in the mountains. Park, nos. 682, 683.

S. KJELLMANII A. E. Porsild in RHODORA 41: 299 (1939). *Cineraria frigida* Richards., f. *tomentosa* Kjellm. Growing in moist places beneath snow patches on Eagle Summit, nos. 854, 855.

The heads are larger in this species, rootstock stouter, and whole plant woolly and tomentose. Rare in high mountains.

S. ATROPURPUREUS (Ledeb.) Fedtsch. in Fedtsch. & Fler. Fl. Eur. Russ. 992 (1910). *Cineraria atropurpurea* Ledeb.; *S. integrifolius* Kjellm. Eagle Summit, nos. 496, 856; Porcupine Dome, 856-a.

A striking plant with orange rays and stem and leaves gray with lanate wool, found commonly on the mountain slopes and dry alpine tundra in the Eagle Summit region. Usually a number of heads in a cluster, but several plants were collected at higher altitudes with a larger single head.

There is a resemblance between this species and specimens in the Gray Herbarium of *S. pyroglossus* Kar. & Kir. from the mountains of the northwestern part of Mongolia.

S. RESEDIFOLIUS Less. See Fernald in RHODORA 26: 113-116 (1924), and Mem. Gray Herb. 2: 259 (1925), for map of general distribution. Rare in the mountains. Eagle Summit, no. 852.

S. CONTERMINUS Greenm. On stony ground near the Big Delta River at Rapids, nos. 490, 1031.

SAUSSUREA ANGUSTIFOLIA DC. Fairly common in dry gravelly places and subalpine tundra of interior valleys. Park, no. 498; Miller House, no. 858; Circle Springs, no. 499.

S. ? MONTICOLA Richards. Wiseman, no. 986.



A tall plant, with the heads longer-peduncled. Similar to *S. remotiflora* Rydb. These three have been grouped under *S. alpina*, and more recently under *S. angustifolia* sens. lat., but at least *S. densa* seems distinct in the field.

*S. Densa* (Hook.) Rydb. Eagle Summit, nos. 497, 857.

Low alpine plant with heads in a close cluster.

*CREPIS NANA* Richards. *Youngia nana* (Richards.) Rydb. Occasional in dry soil on alpine slopes. Park, nos. 505, 684; Rapids, nos. 506, 1029; Wiseman, no. 989.

Low and tufted, often stemless.

*C. ELEGANS* Hook. Apparently rare, but abundant at Miller House, in the piles of stones thrown out by placer mining, nos. 507, 859.

A taller plant, many-stemmed with a long tap-root.

*TARAXACUM MUTILUM* Greene. (Group *Ceratophora* Dahlst.) (determinavit G. Haglund 1938). Wiseman, no. 990.

*T. KJELLMANII* Dahlst. ("verosimiliter") (Group *Vulgaria* Dahlst.). Fairbanks, no. 1065.

*T. KAMTCHATICUM* Dahlst. (Group *Glabra* Dahlst.). Park, no. 686.

*LACTUCA SCARIOLA* L. Introduced. Miller House, no. 508.

*L. PULCHELLA* (Pursh) DC. Along Yukon River, no. 509.

---

THE STATUS OF *CHAMAECYPARIS THYOIDES* IN MAINE.—*Chamaecyparis thyoides* L., an Atlantic Coastal Plains species, has been of interest to Maine botanists since Dr. M. L. Fernald<sup>1</sup> pointed out that no specimens of the tree collected in Maine were known, although it had been reported from Kittery by Dr. G. L. Goodale. In August, 1916, however, "the remains of a once large area of *Chamaecyparis*" were found in the towns of Alfred and Lyman;<sup>2</sup> and in 1936 Dr. Anne Perkins<sup>3</sup> reported an extensive stand in Sanford, York County. Rossbach<sup>4</sup> discovered a small stand of stunted trees in a cold sphagnum bog at Knight's Ponds, Northport, Waldo County in the Penobscot Valley. He also reported the plant in the same region in Appleton, Knox County. Botanists of the University of Maine have inspected a stand of the species in Appleton, and have found it to be somewhat extensive and consisting of tall, vigorous trees equal to the best stand observed in York County.

<sup>1</sup> Fernald, *RHODORA* 5: 203, 1903. <sup>2</sup> Norton, Bull. Josselyn Bot. Soc. no. 6: 7, 1920.

<sup>3</sup> Perkins, *RHODORA* 38: 452, 1936. <sup>4</sup> Rossbach, *RHODORA* 38: 453, 1936.